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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,836	10/20/2003	Masashi Tsuboi	117496	2002

25944 7590 05/23/2005

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EXAMINER

MASINICK, MICHAEL D

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

47

Office Action Summary

Application No.

10/687,836

Applicant(s)

TSUBOI ET AL.

Examiner

Michael D. Masinick

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/20/2003
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date April 12, 2005
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 5/12/2005 have been fully considered but they are not persuasive. In the interview with Kurt Goudy of April 12, 2005, it was explained that the claims as written are very confusing. Examiner's concerns regarding claim 1, specifically the phrase "judgement that the probe contacts the workpiece when the variation of the output from the scale becomes small" have not been addressed. This phrase is written in idiomatic English and can be read in many different ways. In fact, three other examiners presented with this claim language interpreted it in a different ways. It is interpreted herein to mean that a scale has a constantly varying output. If at some point that output becomes less varying (variation becomes small) then a reaction of changing the power applied to the motor is enacted. It is the belief of the examiner however, that this is not the purpose of the current application or the intent of the applicants. In the interview it was explained in a different way, in which the output from the scale itself directs the power of the motor and not the "variation of the output from the scale" as stated in the claim. If this is indeed the correct interpretation, examiner is still concerned about the wording of the claim and would encourage any possible amendments to clarify.
2. Applicant also argues that Takei does not show controlling the power being applied to the motor based on the (variation of) output from the scale. While this is true, the claim is worded in an either/or manner and Takei does show controlling the motor power based on the output from the workpiece sensor.

Information Disclosure Statement

1. Applicant's explanation of the relevance of the filed IDS is appreciated and all references have now been considered.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Please see the response to arguments section above for a full explanation of the 112 problems in claim 1.
4. Furthermore, claim 1 states in the last line "...based on one of the output from the scale". It is previously referred to as the "variation of the output from the scale" and this change causes a further confusion of the note above.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 3-5, 7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,713,136 to Takei.

7. Referring to claim 1, Takei shows a probe driving mechanism for displacement measuring apparatuses for use in measuring the sizes of a workpiece without causing the workpiece to be deformed even when a probe is brought into contact therewith, comprising: a motor for driving the probe (Column 2, lines 15 and 16), a scale for detecting the displacement of the probe ("proximity sensor", Column 3, lines 6-12), a workpiece sensor for detecting the engagement of the probe with the workpiece ("a processing unit judges that the probes have reached a prescribed measuring load after making contact with the object" – Column 3, lines 8-10), and a device for controlling the power applied to the motor, in accordance with an output from the scale when the output from the scale varies in accordance with the power applied to the motor, giving a judgment that the probe contacts the workpiece when the variation of an output from the scale becomes small even though the same level of power continues to be applied to the motor, and setting the power applied to the motor smaller; and controlling the power applied to the motor, in accordance with an output, the speed variation of which is larger, out of an output from the scale and that from the workpiece sensor when the output from the work sensor varies (Column 10, lines 18-43 and Column 11, line 59 – Column 12, line 15).

8. Referring to claim 3, Takei shows wherein, when an output from the workpiece sensor varies and attains a predetermined level, an output from the scale is held and determined as a measurement value of the workpiece (Column 11, line 59 – Column 12, line 15).

9. Referring to claim 4, Takei shows wherein, when an output from the scale is held and determined as a measurement value of the workpiece with a judgment that the measurement

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operation is completed given, the probe is retracted upward by a predetermined quantity, and a measurement operation in which the deformation of the workpiece is prevented is conducted (Column 12, lines 1-15).

10. Referring to claim 5, Takei shows wherein a position memory for storing vertical positions of the probe therein is further provided, the measurement of the workpiece being conducted by controlling the movement of the probe so that the probe is moved at a high speed up to the height stored in the position memory and then at a low speed from the mentioned height so as to bring the probe into contact with a surface of the workpiece (Column 2, lines 51-56).

11. Referring to claim 7, Takei shows wherein the scale is a non-contact type photoelectric encoder ("Proximity sensor").

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,713,136 to Takei as shown above in view of JP 02 221801 A (MITSUTOYO CORP).

14. Takei does not show wherein the probe is supported on a parallel link mechanism so that the probe can be moved freely in the vertical direction, and an output from the workpiece sensor varies when the probe contacts the workpiece to cause a link member constituting the parallel

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link mechanism to attain a predetermined angle owing to the engagement of the probe with the workpiece.

15. Mitsutoyo Corp shows wherein the probe is supported on a parallel link mechanism so that the probe can be moved freely in the vertical direction, and an output from the workpiece sensor varies when the probe contacts the workpiece to cause a link member constituting the parallel link mechanism to attain a predetermined angle owing to the engagement of the probe with the workpiece.

16. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the parallel link mechanism for attaining predetermined angles as shown in Mitsutoyo as the probe support mechanism of Takei because this results in a high-accuracy measurement with uniform and fine measurement pressure (Abstract of Mitsutoyo).

17. Examiner also notes that this patent is cited in the specification as the source of this piece of the current invention.

18. Referring to claim 6, Takei shows wherein the workpiece sensor is made of a photocoupler, and detects in a non-contact state the attainment of a predetermined angle by a link member constituting a parallel link mechanism to cause an output from the photocoupler to vary (paragraph 10, optical contacts).

Conclusion

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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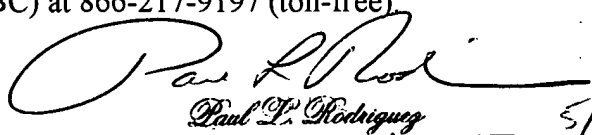
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and to the state of the art at the time of invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D Masinick whose telephone number is (571) 272-3746. The examiner can normally be reached on Mon-Fri, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul L. Rodriguez
Primary Examiner
Art Unit 2125

5/20/05